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FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
Allocation of Spectrum Below) ET Docket No. 94-32
5 GHz Transferred from)
Federal Government Use)

To: The Commission

REPLY COMMENTS OF THE
AMERICAN RADIO RELAY LEAGUE, INCORPORATED

THE AMERICAN RADIO RELAY
LEAGUE, INC.
225 Main Street
Newington, CT 06111

Christopher D. Imlay
BOOTH, FRERET & IMLAY
1233 20th Street, N. W.
Suite 204
Washington, D. C. 20036

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SUMMARY

The American Radio Relay League, Incorporated ("the League"), the national non-profit association of amateur radio operators in the United States, submits its reply comments, pursuant to the Commission's Notice of Inquiry ("the Notice"), FCC 94-97, 59 Fed. Reg. 25589, released May 4, 1994. The Notice sought comments on potential applications for 50 MHz of spectrum that is to be transferred immediately from Federal Government to private sector use, as per the requirements of the Omnibus Budget Reconciliation Act of 1993.

There was no consensus reflected in the comments as to either the utility of the bands preliminarily identified for immediate reallocation (especially that at 2402-2417 MHz) or any specific applications to be made. There was no evaluation of the compatibility between amateur radio uses of 2390-2400 MHz, or 2402-2417 MHz, and any specific commercial uses which might be made of the band. With very few exceptions, the comments were largely unresponsive to the issues identified in the Notice for resolution by the Commission. Those which seriously evaluated the utility of the band for additional licensed users, given current non-government uses of the band, determined that the segments between 2390 and 2417 MHz are not capable of supporting additional non-government users.

Those commenters such as COPE which suggest additional use of the bands for emerging technologies fail to recognize the limitations in the use of the band imposed by Federal statute and by the existing uses of the band. Those commenters largely ignore that which more practical commenters, such as NABER and Motorola, recognize: that compatible sharing between and among expanding ISM and Part 15 users and increasing numbers of radio amateurs on the one hand, and commercial land mobile users on the other, is not feasible. No commenter which suggests additional non-government users of the bands at issue has addressed the statutorily mandated determination that the Commission must make: the extent to which additional commercial users can share with amateur users. Indeed, COPE candidly admits that it has no information on the subject, but asks for significant allocations for land mobile operation anyway.

The Commission cannot on this record, consistent with 47 U.S.C. §923(c)(3)(C), add any additional non-government users to the 2390-2400 or 2402-2417 MHz bands. Rather, the record supports only the preservation of the status quo with respect to the non-government services already allocated in the band. The League suggests, however, that it would be entirely appropriate to elevate the Amateur Service to primary status at 2390-2417 MHz and to elevate the Amateur-Satellite Service to primary status at 2400-2417 MHz.

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**REPLY COMMENTS OF THE
AMERICAN RADIO RELAY LEAGUE, INCORPORATED**

The American Radio Relay League, Incorporated ("the League"), the national non-profit association of amateur radio operators in the United States, by counsel, and pursuant to Section 1.415 of the Commission's Rules (47 C.F.R. §1.415) hereby respectfully submits these, its reply comments, pursuant to the Commission's Notice of Inquiry ("the Notice"), FCC 94-97, 59 Fed. Reg. 25589, released May 4, 1994. The Notice sought comments on potential applications for 50 MHz of spectrum that is being transferred immediately from Federal Government to private sector use, as per the requirements of the Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, Title VI, §6001(a)(3), 107 Stat. 312.¹ In response to certain of the comments filed in this proceeding to date, the League states as follows:

I. Overview of the Comments

1. The comments in this proceeding were eclectic, to say the least. There was no consensus reflected in the comments as to

¹ See also, the Conference Report, H.R. Rep. No. 103-213, 103rd Cong., 1st Sess. (1993).

either the utility of the bands preliminarily identified for immediate reallocation (especially that at 2402-2417 MHz) or any specific applications to be made. There certainly was no evaluation of the compatibility between amateur radio uses of 2390-2400 MHz, or 2402-2417 MHz, and any specific commercial uses which might be made of the band. The League has reviewed approximately 75 comments available in the Commission's RIPS system, and has determined that, with very few exceptions, the comments were largely unresponsive to the issues identified in the Notice for resolution by the Commission. Those which seriously evaluated the utility of the band for additional licensed users, given current non-government uses of the band, determined that the segments between 2390 and 2417 MHz are not capable of supporting additional non-government users.

2. One of the main points raised in the League's comments in this proceeding was that, in identifying the 2300-2417 MHz segment (less 2400-2402 MHz) as a candidate band for reallocation, NTIA was actually providing nothing to the private sector that the Commission was not already using for licensed and unlicensed non-government operations. This point was echoed repeatedly by the commenters in various ways. The 2400-2483.5 MHz band is already in use by Part 18 and Part 15 devices, and by the Amateur and Amateur-Satellite Services. The expansion of Part 15 use of 2400-2483.5 MHz especially caused a number of the commenters in this proceeding to urge that no additional services be permitted use of any

reallocated segments between 2400 and 2417 MHz.² The comments of the Part 15 Coalition stated as follows:

The 2402-2417 MHz band, identified by the NTIA for transfer from government to private sector use, is part of the 2400-2483.5 MHz ISM allocation that is already in use by the private sector. In addition to Part 15 use, the amateur radio service as well as nearly 80 million microwave ovens are located in this band.

The Commission could not allocate this band for a licensed service without disrupting the existing users and incurring unacceptable interference to any new proposed service. In fact, if an allocation was made to a licensed user in this band the situation would be similar to that currently encountered in the lower ISM band: 902-928 MHz...

The Commission can avoid considerable controversy by eliminating this block of spectrum from any future

² See, e.g. the comments of Motorola, Inc. which state, in part, as follows:

As noted in Motorola's comments to the NTIA's Preliminary Report, the 2402-2417 MHz (band) is already heavily used for non-government operations, particularly by consumer microwave ovens and other industrial, scientific and medical ("ISM") devices. The Preliminary Report indicates that the existing noise floor of the band is approaching -100 dBm in several major markets and, given the anticipated increase in the deployment of Part 15 devices in this band, is expected to continue rising (footnote omitted). This level of interference will necessitate higher powered devices to overcome the ambient noise. The net result is higher costs and size of equipment and poorer quality communications services.

The 2390-2400 MHz band suffers similarly due to its close proximity to the 2450 MHz ISM band. Figures E-3 and E-4 of the Preliminary Report show that the noise level measured in this band is within 3 dB of that found within the 2402-2417 MHz band. Thus, devices operating in this band could also suffer a cost and size penalty with respect to other competing services.

Motorola Comments, at 6.

Motorola suggested reasonable alternatives to these unusable segments for use by mobile services for new technologies.

allocation. The current users of this band have co-existed with government users for many years and continued government occupation of this band is tolerable. If, on the other hand, the government abandons this band and the FCC doesn't license a new service there, then it would continue to be a desirable location for future innovative non-licensed devices.

Comments of Part 15 Coalition, at 4.

As well, the comments of AT&T urge that the band 2402-2417 MHz remain available for Part 15 spread-spectrum devices.

3. Even COPE, the Coalition of Private Users of Emerging Multimedia Technologies, whose petition has spawned a series of non-substantive comments urging the allocation of the 2390-2400 MHz and 2402-2417 MHz bands for private land mobile use³, notes that of the 75 MHz it would ideally like to see allocated for land mobile use in the near future, the 2402-2417 MHz band "might present limited opportunities for use in private communications systems"⁴ due to the "significant current usage" of the 2400-2483.5 MHz band by unlicensed spread spectrum users operating under Part 15. COPE focuses its attention on the 2390-2400 MHz band as the most desirable for private system licensees. The Comments of Forestry Conservation Communications Association agree that the spectrum in the 2.4 GHz range entails a "danger of RF interference from

³ Certain comments, such as those of individual municipalities and certain corporations, merely note that current land mobile allocations are crowded and that additional allocations are necessary. They do not address the specific limitations or applications of the 2390-2400 MHz or 2402-2417 MHz bands, as the Notice requested. See, e.g. the comments of Durham, North Carolina, the Kerr-McGee Corporation, Visalia Fire Department, County of Tulare General Services Department, etc.

⁴ See the Comments of COPE, at 5.

microwave ovens and other ISM devices" which will "restrict the usefulness of the band" and that "(s)econdary amateur use may also be a problem because of the difficulty of identifying sources of interference."⁵

4. Even with respect to 2390-2400 MHz, however, there is no consensus in the comments. The National Research Council's Committee on Radio Frequencies (CORF) of the National Academy of Sciences, strongly urges significant restrictions on the 2390-2400 MHz and 2402-2417 MHz bands in order to protect planetary research, primarily at Arecibo, Puerto Rico in the Radio Astronomy Service. As such, CORF cites the NTIA Preliminary Report recommendation that no airborne or space-to-earth links be permitted in the 2390-2400 MHz band, and that certain restrictions be placed on terrestrial use of the band as well.⁶ APCO, the Association of Public-Safety Communications Officials International, Inc. notes that the 2390-2400 MHz and 2402-2417 MHz bands are "encumbered by widespread use of microwave ovens and other ISM devices operating in the same frequency range" which would "prevent many mobile applications in and near residential areas." APCO urges that future studies consider possible expanded uses of the bands near 2.4 GHz, but does not claim that the bands are useful for mobile services now. APCO does suggest that certain Private Operational Fixed Microwave Service (POFS) operations in remote locations might be considered for the band, but offers no plan for POFS operation which would

⁵ FCCA Comments, at 2.

⁶ CORF Comments, at 6.

avoid interference from ISM devices, or amateur operations in the band.

5. In summary, the commenters, almost without exception, acknowledged that the 2390-2417 MHz segment is not useful for additional mobile applications. Those, such as Motorola, which honestly evaluated the possible uses of the band, noted that alternative spectrum for land mobile applications should be sought. As the National Association of Business and Educational Radio, Inc. (NABER)⁷ noted:

Based upon input received from Motorola, Inc. it is NABER's opinion that the reallocation of the 2402-2417 MHz band has limited potential for new non-Federal radio location and fixed and mobile communications technologies, as the 2402-2417 MHz band is in reality already allocated to exclusive non-Federal use. As the current Federal use of this band is limited to five shipborne military radar testing systems, it is clear that there would be little impact on Federal users if the band were reallocated. However, NABER believes any benefit to the general public by reallocation of this band will be minimal.

NABER comments, at 14.

⁷ NABER's analysis of the utility of the 2402-2417 MHz band is based on the noise from ISM devices and unlicensed Part 15 devices, which it concludes will make non-Federal use of the band uneconomical due to current and growing noise levels. It claims that while 2402-2417 MHz is in a relatively quiet section of the microwave oven band, there is nonetheless a substantial noise floor. Given international and domestic regulations [ITU Radio Regulation 742 (1992); 47 C.F.R. §18.101 et seq.] non-ISM operations in the band must accept interference from ISM devices. Telling is that, though NABER notes the possible uses of the band for mobile systems through use of error-correction, spread-spectrum or packet-switched transmission methods to overcome the noise without increased transmitter power, the additional costs of such equipment will be on the order of 2.2 to 50 times the cost of the same system implemented without interference. This cost estimate was from the Telecommunications Industry Association comments to NTIA on the Preliminary Spectrum Reallocation Report.

NABER concludes that, while there could be some sharing between new private services and ISM, or new private services and amateur users, sharing with the combination of ISM, amateur and Part 15 users in the bands is difficult. The overall conclusion to be reached from the comments in this proceeding is that the 2390-2400 and 2402-2417 MHz bands are not likely to have any significant potential for productive additional uses and public benefits beyond those now provided by the Amateur and Amateur-Satellite Services, ISM, and Part 15 users. Therefore, either these segments should be revisited by NTIA and substitute bands chosen, pursuant to 47 U.S.C. §924(b), including (b)(2)(E), or the Commission should leave the existing allocation configuration intact (other than to elevate the Amateur and Amateur-Satellite Services to primary) and add no additional services to those two segments.

II. Non-Amateur Comments Insufficiently Evaluate Necessary Protection of Amateur Uses at 2390-2400 and 2402-2417 MHz

6. While the comments which evaluated the utility of the 2390-2400 and 2402-2417 MHz band for new private uses generally concluded that there was little marginal utility in those segments, the non-amateur commenters failed overall to respond in any meaningful way to the Commission's specific questions in the Notice regarding: (1) the possible disruption of existing use by amateurs of the frequencies proposed for reallocation; (2) whether the 2400-2402 MHz band is sufficient for protection against disruption of amateur uses; (3) whether non-Federal services in the band will be able to share with amateur operations at 2390-2400 Mhz and 2402-

2417 MHz, and (4) if so, what the appropriate technical sharing criteria should be.⁸ While amateur commenters addressed those issues, there is no guidance furnished to the Commission by the other commenters. For example, COPE makes an aggressive claim to the entirety of the 2390-2400 and 2402-2417 MHz segments for mobile services. However, it merely states that "(i)n questions C and D, the Commission has requested comment on whether the proposed reallocations will avoid excessive disruption to (sic) amateur use of Federal spectrum and whether new services can share with the amateur service. At this time, COPE has insufficient information to address potential impact on amateur radio." (COPE Comments, at 7). While that is indeed a candid response, it precludes any additional non-government allocation in the bands proposed for reallocation. Congress specifically indicated its intention that existing amateur uses not be disrupted in the reallocation process,⁹ and obligated NTIA and the Commission to determine the extent to which additional users in the band would or could operate without disruption of amateur operations. Not having done so, COPE has not facilitated the Commission's satisfaction of the Commission's statutory

⁸ See the Notice, at paragraph 9(c) and 9(d), page 7.

⁹ See, 47 U.S.C. §§ 923(c)(1)(C)(iii); 923(c)(3)(C); and 924(b)(2)(E). In summary, the Omnibus Budget Reconciliation Act requires (1) the avoidance of excessive disruption of amateur operation on reallocated Federal Government frequencies; (2) a determination of the extent to which, in general, commercial users could share the frequencies to be reallocated with amateur radio licensees; (3) substitution of proposed reallocation frequencies if the President determines that the reassignment will disrupt the existing use of a Federal Government band of frequencies by amateur radio licensees.

obligation, and cannot expect any accommodation for additional services at 2390-2400 or 2402-2417 MHz.

7. Some other non-amateur commenters simply made no reference to the amateur uses in the band, and did not respond at all to the Commission's inquiries concerning amateur compatibility.¹⁰ Others, such as the American Association of State Highway and Transportation Officials, simply made the unsubstantiated statement that "(t)he two megahertz segment at 2400-2402 MHz is sufficient to avoid excessive disruption of existing Federal Government frequencies by amateur service licensees and should be sufficient for existing amateur-satellite operations." without more.¹¹ A few, however, made an effort to make the determination called for by the Commission, and candidly admitted that such sharing between new private services and the Amateur Service would be difficult. NABER, for example, noted as follows:

There is currently no experience with commercial sharing with the radio amateur service except under Part 15 of the FCC's Rules (footnote omitted). The 2402-2417 MHz band, which is allocated on a secondary basis to the amateur service, is a portion of the spectrum known in the amateur community as the 13 cm band. Although NTIA believes in its Preliminary Report the band is very lightly used by radio amateurs (citation omitted) and the amateur community can satisfy the majority of its

¹⁰ See, e.g. the comments of the American Petroleum Industry and the Association of Maximum Service Television, Inc.

¹¹ This type of unsubstantiated conclusion is irresponsible and must be discarded completely. AASHTO does not make any attempt to evaluate the compatibility of its proposed use (highway maintenance and public safety communications systems) with amateur operations. It does not even indicate that it has as much as passing familiarity with amateur communications systems in the band. It is under the circumstances incompetent to respond to the issue, and should have drawn no conclusions at all on the subject.

spectrum requirements in the band in the remaining 35 MHz band (sic), no definitive analysis is revealed to quantify this claim.

NABER Comments, at 14, 15.

Further, with respect to the 2300-2310¹² and 2390-2400 MHz segments, NABER states as follows:

These bands are used by the military for radar testing systems, such as target scattering and enemy radar simulators, and for telemetry systems. The amateur service also is allocated in these bands on a secondary basis. Protection of highly sensitive receivers and/or high powered transmitters of NASA's deep space network in the adjacent bands may make these bands difficult to use. Further, as discussed above, commercial sharing with the amateur service may be difficult.

NABER Comments, at 17, 18.

The League appreciates NABER's honest and fair evaluation of the situation, and its recognition that the NTIA's summary characterization of amateur use of the bands near 2.4 GHz as "light" is without empirical support.

8. Other than the above, the comments were not useful in evaluating sharing opportunities between existing amateur uses (which are expanding rapidly) at 2390-2417 MHz and possible new commercial uses. The only reasonable approach under the circumstances is as the Part 15 coalition proposed, which is to leave the non-Federal allocations as they are at 2390-2400 and 2402-2417 MHz, if those segments are included in the final reallocation scheme adopted by NTIA. As both AT&T and Apple Computer, Inc. noted in their comments, the Commission should not

¹² This band is not proposed for immediate reallocation with the first 50 MHz, but is part of the NTIA's reallocation proposal overall.

underestimate the use of the 2400-2483.5 MHz segment for Part 15 use in the near future. AT&T suggests that the lower end of the 2400-2483.5 MHz segment is useful for local area networks operating under Part 15, since they would not be seriously impacted by ISM devices, since the LANs can retransmit adversely affected data, and because ISM devices are normally operated in periodic bursts. Local area networks can, says AT&T, share spectrum with amateur operations because amateurs, although operating at higher power, are generally not co-located with those types of Part 15 devices. Apple suggests, as do other commenters, that Part 15 spread spectrum use of the 2400 MHz band will increase substantially in the near future, especially by local area networks. Regardless of the compatibility between the Amateur and Amateur-Satellite Services and Part 15 users (which is not at issue here), it is apparent that both Amateur and Amateur-Satellite, and Part 15 uses in the 2400-2450 MHz band are significantly increasing, and that such uses are not compatible with additional licensed commercial users. The League recommends, based on the comments, that there be no change in the non-government allocation table at 2390-2400 and 2402-2417 MHz after the NTIA reallocation process is final.

III. Amateur Comments Reveal Significant Need For 2390-2417 MHz

9. A reasonably large number of amateur radio entities and individuals submitted comments in response to the Notice. Almost all noted that the Commission should not add to the amateur, Part 15 and ISM uses in the 2390-2417 MHz band now. Many noted that NTIA

had been informed, by the League and otherwise, of amateur uses in the 2300-2310, 2390-2400, and 2402-2417 MHz bands, but that information was not reflected in the Preliminary Reallocation Report.

10. Some of the amateur comments also noted the expanding public service uses of the 2400-2417 MHz segment, such as for amateur television. As noted by the Amateur Television Network:

This is one of the best areas for the Amateur Radio community to help the public safety workers to communicate by use of the Amateur Television Repeaters during disasters. A helicopter can fly over an affected area and the command center personnel can see first hand the disaster damage and save several minutes of air time that would otherwise be needed to describe the disaster scene. Also linked voice and data repeaters can help relieve congestion in ordering medicine and other emergency supplies during disasters. Health and welfare messages can be relayed as was the case during the Northridge (LA) earthquake last winter using a 440 MHz voice repeater network linked on 2.3 and 2.4 GHz.

Comments of the Amateur Television Network, at 2.

Most important, however, are the comments of the Radio Amateur Satellite Corporation (AMSAT) relative to near-term future uses of the 2390-2450 MHz band by amateurs. AMSAT notes that the ITU allocation in the 2.4 GHz band to the Amateur-Satellite Service internationally is 2400-2450 MHz, and thus any reallocation of frequencies in the United States from the Amateur-Satellite Service to another service, or any introduction of additional or substituted sharing partners would certainly have adverse effects on the Amateur-Satellite Service worldwide, and would be difficult to coordinate with other administrations.

11. Just as important on a domestic basis, however, the Amateur-Satellite Service has a need for a bandwidth greater than the 2 MHz at 2400-2402 MHz carved out by NTIA. As AMSAT notes:

As the Commission notes, the NTIA excluded 2400-2402 MHz from the proposed reallocation. These frequencies are of vital importance to spacecraft operations in the Amateur-Satellite Service, for satellites in current use as well as those under construction. However, in the readily foreseeable future, AMSAT anticipates greatly increased demand for amateur satellite operations in that portion of the spectrum, far more than can reasonably be accommodated within a 2 MHz band. It is certainly too restricted to accommodate such wideband techniques as fast-scan television, even if compression techniques are employed. AMSAT hopes to be able to employ such modes on future spacecraft. The 10 MHz wide 1260-1270 MHz uplink-only Amateur-Satellite Service allocation is available for such applications, and a similar bandwidth is needed as a paired downlink near 2400 MHz.

AMSAT Comments, at 3.

Among the commenters in this proceeding, only the League and AMSAT noted the international effects of additional users in the 2400-2450 MHz band, and the difficulty in international coordination of uses that would preclude standard amateur-satellite downlink bands. Also, as noted by AMSAT, there are increasing terrestrial amateur operations between 2390 and 2450 MHz that cannot be satisfied in the 2400-2402 MHz segment carved out by NTIA from the reallocation segments. These include amateur television and wideband, high-speed data links. The adaptability of the Amateur Service bodes well for operation in an ISM environment such as 2390-2450 MHz. With the slightest encouragement, the Amateur and Amateur-Satellite Services will expand operations in the 2390-2450 MHz band, consistent with reasonable growth of Part 15 applications in the same segment, and consistent with existing and future ISM uses. What will disrupt

amateur use of the band, however, would be the addition of new fixed or mobile uses in residential environments, which the non-amateur commenters have already acknowledged would be "difficult."

IV. Conclusions

12. The comments in this proceeding, though diverse in the points made, offer a grim view of the potential for additional non-government use of the 2390-2400 and 2402-2417 MHz bands, should NTIA finalize the reallocation. The band is not suitable for additional non-government users, according to a wide variety of commenters, including land mobile companies, Part 15 manufacturers, Radio Astronomy representatives, and radio amateurs. Those commenters such as COPE which suggest additional use of the bands for emerging technologies fail to recognize the limitations in the use of the band imposed by Federal statute and by the existing uses of the band. Those commenters largely ignore that which more practical commenters, such as NABER and Motorola, recognize: that compatible sharing between and among expanding ISM and Part 15 users and increasing numbers of radio amateurs on the one hand, and commercial land mobile users on the other, is not feasible. No commenter which suggests additional non-government users of the bands at issue has addressed the statutorily-mandated determination that the Commission must make: the extent to which additional commercial users can share with amateur users. Indeed, COPE candidly admits that it has no information on the subject, but asks for significant allocations for land mobile operation anyway.

13. The Commission cannot on this record, consistent with 47 U.S.C. §923(c)(3)(C), add any additional non-government users to the 2390-2400 or 2402-2417 MHz bands. Rather, the record supports only the preservation of the status quo with respect to the non-government services already allocated in the band. The League suggests, however, that it would be entirely appropriate to elevate the Amateur Service to primary status at 2390-2417 MHz and to elevate the Amateur-Satellite Service to primary status at 2400-2417 MHz. The Commission's obligation in this proceeding was to conduct a preclusion study with respect to amateur use of the band, and to determine the compatibility factors with respect to alternative commercial sharing partners to amateurs in the bands proposed for reallocation. The record in this proceeding is sufficient to establish that there is little compatibility between existing and near-term planned amateur operation in the bands, and that additional uses are impractical. It is requested that the Commission add no other radio services to those already operational in the band.

14. If, notwithstanding the foregoing, the Commission intends to add non-government users to the 2390-2400 and 2402-2417 MHz bands, elevation of amateur status in those segments to at least co-primary with the added commercial users is the minimum necessary to protect existing, and near-term future amateur uses of the band, including wideband television, satellite, and data and analog

linking, as well as the traditional and well-established weak signal operations at 2300-2310 MHz.¹³

Therefore, the foregoing considered, the American Radio Relay League, Incorporated again respectfully requests that the Commission insure, in identifying any additional services to be

¹³ This proceeding does not address the possible future reallocation of the 2300-2310 MHz band. The League's comments in this proceeding established a need for a primary allocation in that band, in the vicinity of 2304 MHz, to protect the existing weak-signal operation there, and to encourage further growth of use of the band for propagation experimentation. The receivers used in such communications are sensitive and cannot operate in high-noise environments. Most recently, more than 200 stations have indicated active operation in the 2304 MHz range.

The amateur use of that segment at 2300-2310 MHz becomes important in this proceeding in that the Commission has sought comment on whether certain portions of the 2390-2400 MHz or 2402-2417 MHz bands should be withheld pending reallocation of other bands. The 2300-2310 MHz band is uniquely poorly suited for pairing with other band because of significant amateur use of the 2303-2305 MHz portion.

In any event, the comments do not indicate any support for the withholding of any portion of 2390-2400 MHz or 2402-2417 MHz for future pairing with other segments. As COPE states in its comments: "(g)iven the amount of time necessary to complete spectrum allocation proceedings and to develop technical and service rules, COPE urges the Commission not to intentionally delay allocation of this spectrum simply to 'marry' this spectrum with future spectrum allocations." (COPE Comments, at 10). The Commission should not, in view of the sentiments expressed in the comments in this proceeding, make any plans for pairing of any portion of the 2390-2400 or 2402-2417 MHz band with other bands which might be under consideration at a later time for reallocation by NTIA.

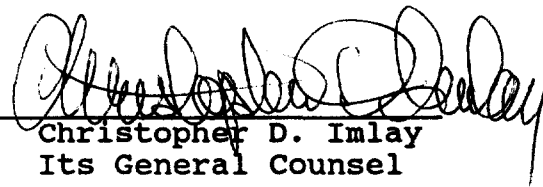
placed in this spectrum, benign accommodation of continued amateur occupancy of the 2300-2310 and 2390-2417 MHz allocations.

Respectfully submitted,

**THE AMERICAN RADIO RELAY
LEAGUE, INCORPORATED**

225 Main Street
Newington, CT 06111

By


Christopher D. Imlay
Its General Counsel

BOOTH, FRERET & IMLAY
1233 20th Street, N.W.
Suite 204
Washington, D.C. 20036
(202) 296-9100

June 30, 1994

CERTIFICATE OF SERVICE

I, Margaret A. Ford, Office Manager in the law firm of Booth, Freret & Imlay, do certify that copies of the foregoing **REPLY COMMENTS OF THE AMERICAN RADIO RELAY LEAGUE, INCORPORATED** were mailed first class, postage prepaid, this 30th day of June, 1994, to the following:

Mr. Richard Parlow
Associate Administration for Spectrum Management
National Telecommunications and Information Administration
U. S. Department of Commerce
14th & Constitution Avenues, N. W.
Washington, D. C. 20230

Michael D. Kennedy
Stuart E. Overby
Motorola, Inc.
1350 I Street, N. W.
Washington, D. C. 20005

Jack Taylor, Esquire
9215 Rancho Drive
Elk Grove, CA 95624
Counsel for Part 15 Coalition

Mark C. Rosenblum
Kathleen F. Carroll
Ernest A. Gleit
295 North Maple Avenue
Room 3261B3
Basking Ridge, NJ 07920
Counsel for AT&T

Coalition of Private Users of Emerging Multimedia Technologies
c/o Utilities Telecommunications Council
1140 Connecticut Avenue, N. W.
Suite 1140
Washington, D. C. 20036

Mr. Tommy Pope
Communications Maintenance Director
Emergency Services Agency
City of Durham
314 North Mangum Street
Durham, NC 27701

J. E. Albee, Manager
Corporate Telecommunications
Kerr-McGee Corporation
1667 K Street, N. W.
Washington, D. C. 20006

Mr. Joe Hopper, Fire Marshal
Visalia Fire Department
County of Tulare
2500 W. Burrel Avenue
Visalia, CA 93291

Mr. Bruce K. Lowe
General Services Deputy Director
County of Tulare, General Services Department
2500 W. Burrel Avenue
Visalia, CA 93291

John D. Lane
Robert M. Gurss
Wilkes, Artis, Hedrick & Lane, Chartered
1666 K Street, N. W.
Suite 1100
Washington, D. C. 20006
Counsel for Forestry-Conservation Communications Assn.

Mr. Robert L. Riemer
Senior Program Officer
National Research Council
Commission on Physical Sciences, Mathematics and Applications
2101 Constitution Avenue
Washington, D. C. 20418

John D. Lane
Robert M. Gurss
Wilkes, Artis, Hedrick & Lane, Chartered
1666 K Street, N. W.
Suite 1100
Washington, D. C. 20006
Counsel for Associated Public-Safety Communications Officers,
Inc.

David E. Weisman
Alan S. Tilles
Meyer, Faller, Weisman and Rosenberg, P. C.
4400 Jenifer Street, N. W.
Suite 380
Washington, D. C. 20015
Counsel for National Association of Business and Educational
Radio, Inc.

Wayne V. Black
Joseph M. Sandri, Jr.
Keller and Heckman
1001 G Street, N. W.
Suite 500 West
Washington, D. C. 20001
Counsel for American Petroleum Institute

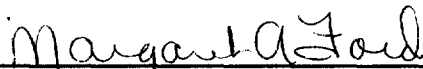
Gregory M. Schmidt
Ronald J. Krotoszynski, Jr.
Covington & Burling
1201 Pennsylvania Avenue, N. W.
Post Office Box 7566
Washington, D. C. 20044
Counsel for Association for Maximum Service Television, Inc.

Mr. David J. Hensing
Deputy Executive Director
American Association of State Highway and Transportation Officials
444 N. Capitol Street, N. W.
Suite 249
Washington, D. C. 20001

Henry Goldberg, Esquire
Goldberg, Godles, Wiener & Wright
1229 Nineteenth Street, N. W.
Washington, D. C. 20036
Counsel for Apple Computer, Inc.

Amateur Television Network
Mr. Mike Collis
Post Office Box 1594
Crestline, CA 92325

Radio Amateur Satellite Corporation
Post Office Box 27
Washington, D. C. 20044


Margaret A. Ford